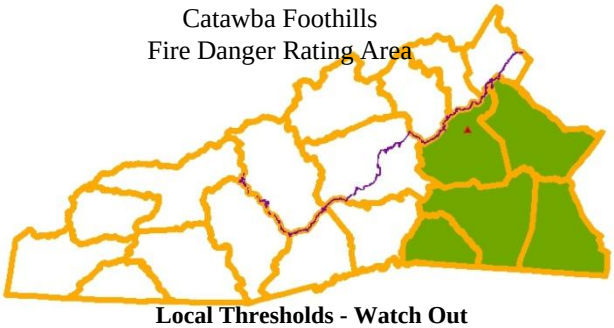
Catawba Foothills
Fire Danger Rating Area



Spring Fire Danger Pocket Card
Grandfather RAWS 1992-2006
Hickory NWS 1973-1998
January 1 to June 30, 1973-2006

Fuel Model E - Use this model after leaf fall for hardwood and mixed hardwood-conifer types where the hardwoods dominate. The fuel is primarily hardwood leaf litter. Fuel Model E does not reflect values considering dead 100 or 1000 hour time lag fuels. The oak-hickory types are best represented by Fuel Model E, but E is an acceptable choice for northern hardwoods and mixed forests of the Southeast. In high winds, the fire danger may be underrated because rolling and blowing leaves are not accounted for.

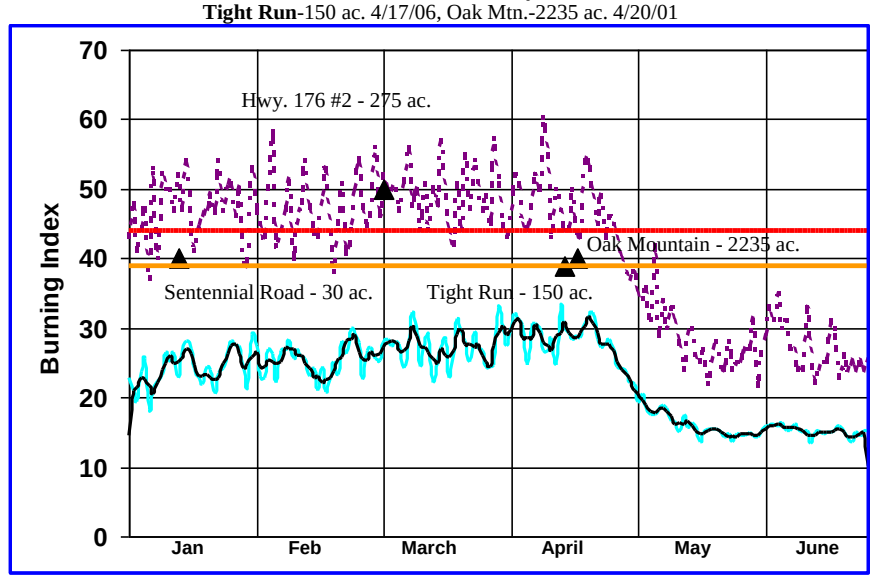
Local Considerations - South to Southwest slopes in excess of 55% can drastically effect rates of spread and flame lengths.
- Fuel Model E can transition rapidly into mountain laurel and rhododendron causing the potential for extreme flame lengths and rates of spread forcing the consideration of alternative fuel models
- When 1000 hour fuel moistures drop below 20% mop-up requirements will be extensive

Fires To Remember: Sentennial Road-30 ac. 1/13/02, **Hwy. 176 #2**-275 ac. 3/3/06, **Tight Run**-150 ac. 4/17/06, Oak Mtn.-2235 ac. 4/20/01

Local Thresholds - Watch Out

Combinations of any of these three factors can greatly increase fire behavior
- RH less than 25%,
- Temperature over 60° F.
- 20' wind speed over 10mph, which equates to an eye level in-stand windspeed of greater than 6 mph using a reduction factor of .4 .

- Average - average over a 34 year period (6072 observations)
- 3-Day Mean - 3 day running mean (1 day prior to 1 day after)
- 90th Percentile - Only 10% of 6072 observations exceeded 39 over the 34 years from 1973 to 2006
- 97th Percentile - Only 3% of 6072 observations exceeded 46 over the 34 years from 1973 to 2006
- Maximum - Highest BI by day for 1973 to 2006



Burning Index (BI) - relates to the contribution of the fire's behavior in containing the fire. The difficulty of containment is directly proportional to the fireline intensity. BI is derived from the SC + the ERC. BI is a cross reference of fireline intensity & flame length. It assesses spotting & crown fire potential as well as suppression resource needs & tactical considerations. In Hardwood fuels, **BI's of 40+,** are exceptionally intense fires with much spotting**.** The doubling of the BI, 20 to 40 can increase flame length from 2 to 4 ft. yet, this is a 5 fold increase in fireline intensity.

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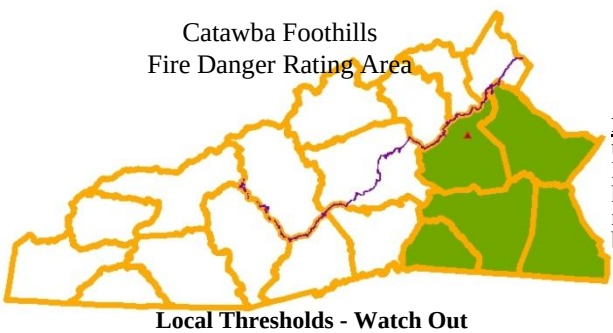

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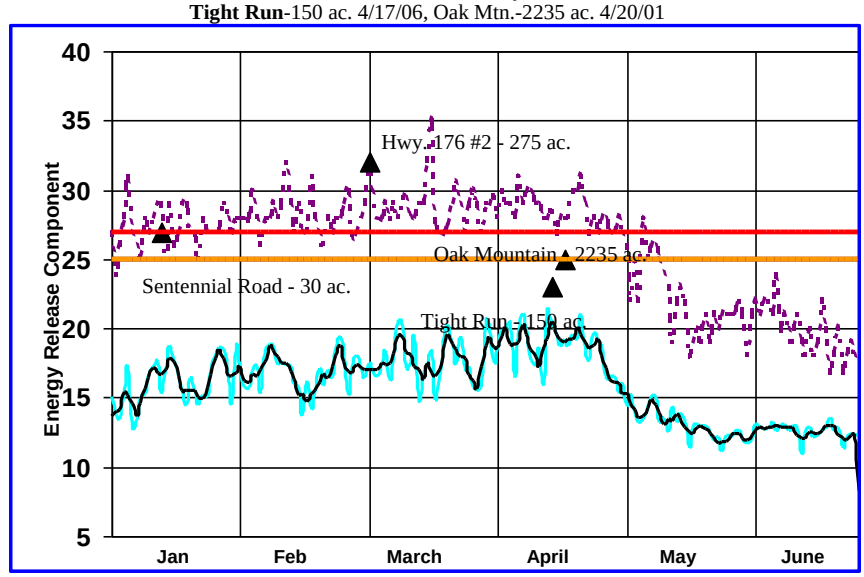
- Average - average over a 34 year period (6072 observations)
- 3-Day Mean - 3 day running mean (1 day prior to 1 day after)
- 90th Percentile - Only 10% of 6072 observations exceeded 25 over the 34 years from 1973 to 2006
- 97th Percentile - Only 3% of 6072 observations exceeded 27 over the 34 years from 1973 to 2006
- Maximum - Highest BI by day for 1973 to 2006



Energy Release Component is a number relating to the available energy released from forest fuels (BTU / ft²) at the head of a fire's flaming front. ERC is a composite of all live & dead fuel moistures. It is a very good reflection of drought conditions. It is a "build up" type index. Given a fire start in a fuel with a high ERC, fire containment can be expected to be difficult. ERC is very valuable in assessing the depth of a burn, consumption of the various fuel sizes, residual burning , and mop-up requirements. In Hardwood fuels, **ERC's of 25+,** are exceptionally intense fires with extreme radiant heat**.** Mop up can be extensive where large time lag fuels are present.

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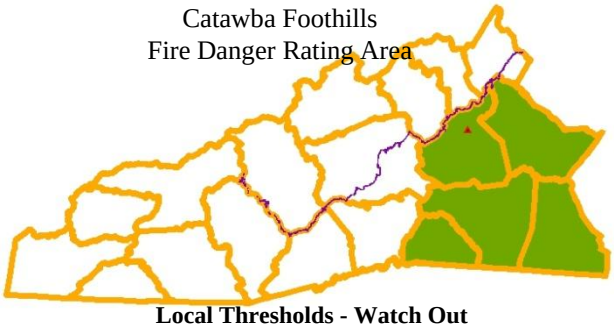

Fall Fire Danger Pocket Card
Grandfather RAWS 1992-2007
Hickory NWS 1973-1998
July 1 to December 31, 1973-2007

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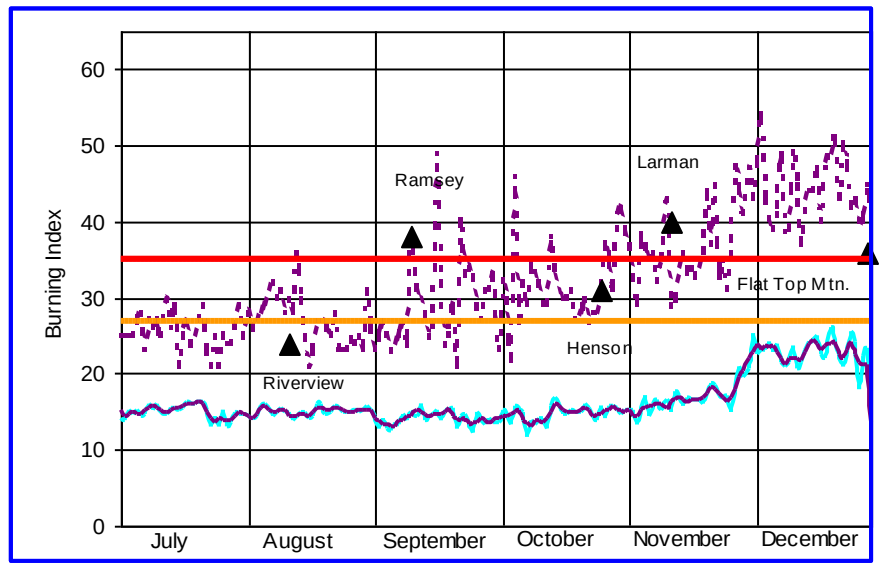
- When 1000 hour fuel moistures drop below 20% mop-up requirements will be extensive

Fires To Remember: Riverview 15 ac. 8/11/99, Ramsey Fire 42 ac. 9/10/99, Henson Fire 156 ac. 10/26/01, Larman 184 ac. 11/12/01, Flat top Mtn. 62 ac. 12/30/01

Local Thresholds - Watch Out

Combinations of any of these three factors can greatly increase fire behavior
- RH less than 25%,
- Temperature over 60° F.
- 20' wind speed over 10mph, which equates to an eye level in-stand windspeed of greater than 6 mph using a reduction factor of .4 .

- Average - average over a 34 year period (5937 observations)
- 3-Day Mean - 3 day running mean (1 day prior to 1 day after)
- 90th Percentile - Only 10% of 5937observations exceeded 28 over the 34 years from 1973 to 2007
- 97th Percentile - Only 3% of 5937 observations exceeded 36 over the 34 years from 1973 to 2007
- Maximum - Highest BI by day for 1973 to 2007



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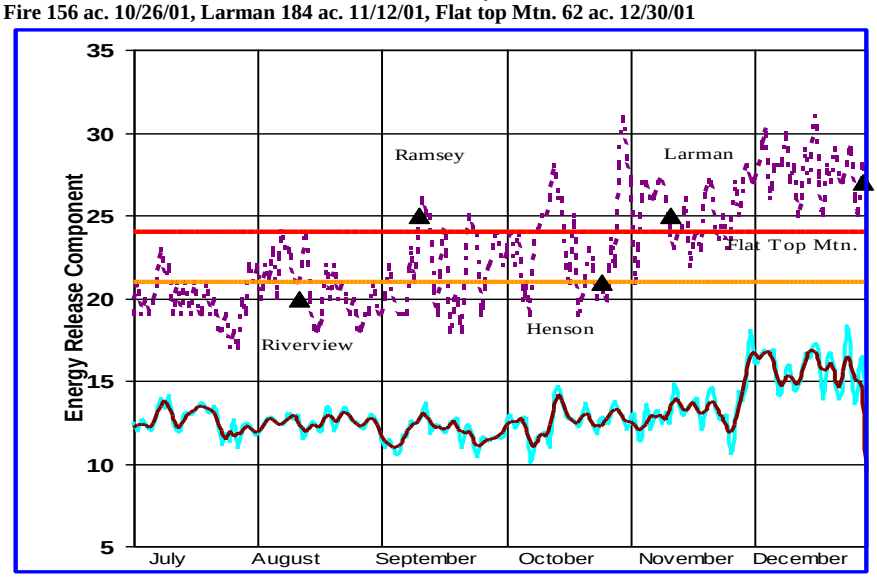
- Average - average over a 34 year period (5937 observations)
- 3-Day Mean - 3 day running mean (1 day prior to 1 day after)
- 90th Percentile - Only 10% of 5937 observations exceeded 21 over the 34 years from 1973 to 2007
- 97th Percentile - Only 3% of 5937 observations exceeded 24 over the 34 years from 1973 to 2007
- Maximum - Highest BI by day for 1973 to 2007



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